

## CLAIMS

1. A method of manufacturing a bismuth based oxide superconducting wire,  
characterized by the steps of preparing a raw material powder and subjecting  
5 the raw material powder to plastic working and heat treatment;  
wherein the raw material powder contains superconducting phases comprising  
Bi, Pb, Sr, Ca, Cu, and O in a composition ratio of approximately 2:2:1:2  
(Bi+Pb):Sr:Ca:Cu and non-superconducting phases containing Pb;  
wherein the composition ratio (Bi+Pb):Sr:Ca:Cu of the raw material powder is  
10 approximately 2:2:2:3; and  
wherein the ratio of the non-superconducting phases to the superconducting  
phases is 5 wt% or less.
2. A method of manufacturing a bismuth based oxide superconducting wire,  
15 characterized by the steps of preparing a raw material powder and subjecting  
the raw material powder to plastic working and heat treatment;  
wherein the raw material powder contains orthorhombic superconducting  
phases comprising Bi, Pb, Sr, Ca, Cu, and O in a composition ratio of  
approximately 2:2:1:2 (Bi+Pb):Sr:Ca:Cu; and  
20 wherein the composition ratio (Bi+Pb):Sr:Ca:Cu of the raw material powder is  
approximately 2:2:2:3.
3. A method of manufacturing a bismuth based oxide superconducting wire,

characterized by the steps of:

preparing a raw material powder,

subjecting the raw material powder to heat treatment at 600°C to 750°C and

at oxygen partial pressure of 0.02 atm or less; and

- 5 further performing plastic working and heat treatment on the raw material powder after the heat treatment;

wherein the raw material powder contains Bi, Pb, Sr, Ca, Cu, and O in a composition ratio of approximately 2:2:2:3 (Bi+Pb):Sr:Ca:Cu.

- 10 4. A bismuth based oxide superconducting wire obtained by the manufacturing method according to any one of claims 1 to 3.